

RAZNITSINA, E. A.

RAZNITSINA, E. A. , and KRASIL'NIKOV, N. A. "Bacterial Method of Fusarium Control in Pine Seedlings," Agrobiclogiia, no. 5-6, 1946, pp. 109-121.  
20 Ag822

SO: SIRA SI - 12-53, 15 December 1953

3M

KHILYAKOV (Y. P.) & RAZNITSEVA (Mme E. A.) *Использование микро-  
инъекции бактерий для бактериальной резистентности семян при озимизации.*  
[The use of mycolytic bacteria for the inoculation of seed during  
vernalization.] *Bull. Acad. Sci. U.R.S.S., 1939, Ser. biol., 1,*  
*pp. 117-120, 1939.*

The use of mycolytic bacteria for the prevention of fungous infection  
during vernalization of cereal seed-grain was demonstrated in pot  
experiments with spring wheat Caesium 0111 and *Fusarium grami-  
nearum* [*Gibberella saubinetii*]. The grain yields of plants grown from  
seed soaked for 24 hours in a liquid culture of mycolytic bacteria F-80,  
in a water suspension of *G. saubinetii*, or in a mixture of the suspension  
of the fungus with the bacterial culture or a filtrate of it was 126.6,  
26.9, 128.6, and 115.5 per cent., respectively, compared with 100 per  
cent. in the control plants raised from seed soaked in water. Similar  
results were obtained with the bacterial isolation F-24, but it reduced  
the yield of straw below that of the control. In inoculation experiments  
made in many replications seed-grain treated with mycolytic bacteria,  
particularly F-80, was not attacked by *G. saubinetii*, while that left

untreated invariably became infected and perished soon after germina-  
tion.

RAZNITSIN, M.A.

Straightening electrode tools. Stan. i Instr. 36 no.8:30-31  
Ag '65. (MIRA 18:9)

REBINYU, V.A.

Establishing main trends in prospecting for petroleum and gas  
in the Komi A.S.S.R. Izv. Komi. fil. Geog. ob-va SSSR no.8:  
68-72 '63. (MIRA 17.6)

RAZNITSYN, V.A.

Age of the Kislorucheyeskaya suite of the Riphean folded  
basement in the Timan Range. Izv. AN SSSR. Ser. geol. 30  
no.5:129-134 My '65. (MIRA 18:6)

1. Institut geologii Komi filiala AN SSSR, Syktyvkar.

RAZNITSYN, V.A.

Structure of the southern Timan Ridge and the southwestern Timan  
Ridge region. Trudy Inst.geol. Komi fil. AN SSSR no.2:53-63  
'62. (MIRA 15:7)

(Timan Ridge region--Geology, Structural)

RAZNITSYN, V.A.

Development of large platform structures in the Timan-Pechora area.  
Trudy Inst.geol.Komi fil. AN SSSR no.3:113-123 '62. (MIRA 16:9)  
(Pechora Valley--Geology, Structural)  
(Timan Ridge region--Geology, Structural)

RAZNITSYN, V.A.

Riphean sediments in the Timan Ridge. Trudy NIIGA 130:37-57 '62.  
(MIRA 16:5)  
(Timan Ridge—Geology, Stratigraphic)



RASNITSYN, V.A.

Prospects for finding oil and gas in the Timan-Pechora region.  
Neftegaz. geol. i geofiz. no. 10-27-91 '63. (MGB 17-9)

1. Institut geologii Komi filiala AN SSSR.

RAZNITSYN, V.A.

Izhma-Omra complex of the Timan Ridge. Geol.nefti i gaza 6  
no.8:56-60 Ag '62. (MIRA 15:9)

1. Institut geologii Komi filiala AN SSSR.  
(Timan Ridge--Petroleum geology)

RAZNITSYN, V.A.

Nature of dislocations in the Timan Ridge. Biul.MOIP.Otd.geol.  
37 no.5:165 S-O '62. (MIRA 15:12)  
(Timan Ridge—Geology,Structural)

RAZNITSYN, V.A.

A specific feature of Tartarian deposits of the Timan Ridge. Dokl.  
AN SSSR 146 no.1:187-189 S '62. (MIRA 15:9)

1. Institut geologii Komi filiala AN SSSR. Predstavleno akademikom  
N.M. Strakhovym.  
(Timan Ridge—Geology, Stratigraphic)

RAZNITSYN, V.A.

Origin of the earth's crust and the main stages of its  
development. Izv.vys.ucheb.zav.; geol. i razv. 8 no.10:  
3-12 0 '65. (MIRA 19:1)

1. Institut geologii Komi filiala AN SSSR.

RAZNITSYN, V.A.

New data on the development of marine Devonian sediments in the  
central Timan Range. Sov.geol. 8 n. 133-136 0 1965.

I. Institut geologii Komi filiala AN SSSR.

(MIRA 18:12)

RAZNITSYN, V.A.

Boundary between the Carboniferous and Permian in the Timan Ridge. Izv.AN SSSR. Ser.geol.27 no.2:94-97 F '62. (MIRA 15:1)

1. Institut geologii Komi filiala AN SSSR, g. Syktyvkar.  
(Timan Ridge--Geology, Stratigraphic)

RAZNITSYN, V.A.

Dzhezhimparma dislocations associated with the upthrow fault in the southern Timan. Dokl. AN SSSR 140 no.2:430-433 S '61.

(MIRA 14:9)

1. Institut geologii Komi giliiala AN SSSR. Predstavleno akademikom D.V.Nalivkinym.

(Dzhezhimparma--Geology, Structural)



RAZNITSYN, V.A.

Journal of oil-conditions determining the formation and gas-bearing  
sediments in the upper Pechora Valley. Trudy Komi fil. AN SSSR no.7:  
63-95 '59. (MIRA 13:11)

(Pechora Valley--Geology, Stratigraphic)

(Petroleum geology)

(Gas, Natural--Geology)

RAZNITSYN, V.A.

Age of salt-bearing deposits and diabases in the region of the village of Seregovo in the southwestern part of the Timan area.  
Dokl.AN SSSR 133 no.5:1176-1178 Ag '60. (MIRA 13:8)

1. Institut geologii Komi filiala Akademii nauk SSSR. Predstavleno akad. N.S.Strakhovym.

(Seregovo region--Salt domes)  
(Petroleum)

RAZNITSYN, V.A.

Stratigraphy and oil and gas potentials of the lower Carboni-  
ferous in the southern Timan Ridge. Trudy VNIGRI no.133:

134-154 '59.

(MIRA 13:1)

(Timan Ridge--Petroleum geology)

(Timan Ridge--Gas, Natural--Geology)

RAZNITSYN, V.A.

Lower Tournai sediments in the southern part of the Timan Ridge.  
Trudy VNIGNI no.14:177-199 '59. (MIRA 12:10)

1. TSentral'naya nauchno-issledovatel'skaya laboratoriya Gosu-  
darstvennogo soyuznogo Ukhtinskogo kombinata.  
(Timan Ridge--Geology, Stratigraphic)

RAZNITSYN, V.A.

Border between the Devonian and Carboniferous in the southern part  
of the Timan Ridge. Geol.nefti 2 no.10:40-45 0 '58,

(MIRA 11:11)

1. TSentral'naya nauchno-issledovatel'skaya laboratoriya Ukhtinskogo  
kombinata.

(Timan Ridge--Geology, Stratigraphic)

20-114-4-51/63

AUTHOR: Raznitsyn, V. A.

TITLE: The Main Features in Palaeogeography of the Carboniferous of the Timan-Pechora Province (Osnovnyye cherty paleogeografii karbona Timano-Pechorskoy provintsii)

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol. 114, Nr 4, pp. 865 - 868 (USSR)

ABSTRACT: The Ukhta geologists count to the Timan-Pechora province: 1) Timan, 2) the elevated part of the middle Pechora which extends from the Shchugora and Podcherema rivers in the South East to the "Dim. continent" (Mutnyy Materik) and obviously to Naryan-Mara in the North West, 3) the Pechora depression which separates the two elevated areas. Among the oldest rocks transformed rocks of the M-suite occur in Timan, also of Devonian; Mesozoicum is developed in the Pechora depression. In the East the Pechora depression flows together with the pre-Ural through-bend, where Permian deposits occur on the surface. Successively Carboniferous Permian, and in the Pechora depression moreover Jurassic and Cretaceous, are overlying the Devonian strata. Carboniferous was investigated in many bore-holes and exposures

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20- 114-4-51/63

The Main Features in Palaeography of the Carboniferous of the Timan-  
-Pechora Province

in middle-and South Timan and in middle Pechora. The depression itself is not so well known. The Carboniferous thickness increases from the West towards the East (from 160 to 940 m). Timan is a zone of less thickness. Thus the existence of an ancient mountain formation is emphasized which influenced the sedimentation process during the later stage of development of the Timan—Pechora province. If Timan is compared with the area of North Ural, the following difference becomes evident: In the Timan and in the Pechora depression the negative movements were slowed down in the lower Carboniferous, whereas they were accelerated in the East. The contrary was the case in the middle- and upper Carboniferous. In the lower Carboniferous the area in question took part in the negative movements of the Ural. An intensive through-bend took place in lower Carboniferous in a meridional stripe bordering on the Ural. In middle- and upper Carboniferous the development of depressions and elevations was subordinate to the North Western direction of Timan. The

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20-114-4-51/63

The Main Features in Palaeogeography of the Carboniferous of the Timan-  
-Pechora Province

great sedimentation cycle characteristic of lower Carboniferous is repeated in  $C_2 + C_3$ : Limestone-dolomite masses, rhythmically alternating with loams. Essential shifts in the distribution of sea and land took place before the depositing of the great carbonate mass in the upper Carboniferous. Up to that time the water boundaries remained rather constant. An area which had not been flooded in the Turn age slowly subsided in the Visé age. The Visé deposits are here not especially thick, they increase, however, towards the East. A second area of middle and great through-bends in Turn and Visé shows a rapid increase of the  $C_2$  sediments towards the East. Also the stripe of anticlinal elevations of middle Pechora belongs to that area. They do not exist in  $C_1$ . The Turn age began with deposits of clastic and algae limestones which in more Western direction change into argillaceous-dolomitic deposits. After a short regression

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20-114-4-51/63

The Main Features in Palaeography of the Carboniferous of the Timan-  
-Pechora Province

the Likhvin Sea again flooded almost the entire area of the former Etren Sea. The same rhythm is also repeated in the Upin age. The denudation area of the terrigenous material was in the South (near Ksenofontovo). Also petroleum and natural gas occur here in the sandstone. Before the Visé-transgression the entire area of Timan-Pechora was desiccated. This lasted almost the whole Yasnopolyana age. In the Northern provinces of Timan and of the Pechora depression there was a fight between water and land. The second great cycle sedimentation began with the transgression of the Bashkir Sea. A marine regime covers almost the entire province in  $C_2$  and  $C_3$ . Meanwhile the whole North Eastern part of the Russian Plateau outside the Pechora depression was desiccated. The sea shifted to the South East. The vast areas adjacent to Ksenofontovo, however, were flooded. There are 2 figures.

Card 4/5

20-114-4-51/63

The Main Features in Palaeography of the Carboniferous of the Timan-  
-Pechora Province

ASSOCIATION: Tsentral'naya nauchno-issledovatel'skaya laboratoriya  
Ukhtinskogo kombinata (Central Scientific Research Laboratory  
of the Ukhta Combine)

PRESENTED: December 25, 1956, by N. M. Strakhov, Member, Academy of  
Sciences, USSR

SUBMITTED: December 24, 1956

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Card 5/5

RAZNITSYN, V.A.

Carboniferous sediments in the Timan-Pechora gas and oil region.  
Trudy VNIIGAZ no.4:17-36 ' 58. (MIRA 11:12)

(Timan Ridge--Gas, Natural--Geology)

(Timan Ridge--Petroleum geology)

(Pechora Valley--Gas, Natural--Geology)

(Pechora Valley--Petroleum geology)

RAZNITSYN, V.A.

Two stages in the development of the Timan-Pechora gas and  
oil region in the Carboniferous. Trudy VNIIGAZ no.4:37-48 ' 58.  
(MIRA 11:12)

(Timan Ridge--Gas, Natural--Geology)

(Timan Ridge--Petroleum geology)

(Pechora Valley--Gas, Natural--Geology)

(Pechora Valley--Petroleum geology)

RAZNITSYN, V.A.

~~Boundary between the Devonian and Carboniferous in the southern~~  
part of the Timan Ridge. Biul. MGIP. Otd. geol. 33 no.2:  
156-157 Mr-Apr '58. (MIRA 11:10)  
(Timan Ridge--Geology, Stratigraphic)

UNIT IN... , RUMBLE, VIA.

Some characteristics of basalt igneous activity in the...  
Brit. Mus. Nat. Hist. 39 no.5:119-132 S-0 '64.

(MIRA 18:2)

AUTHOR: Raznitsyn, V.A. SOV-5-58-2-32/43

TITLE: The Border Between Devonian and Carboniferous Rocks in South Timan (O granitse devona i karbona na Yuzhnom Timane)

PERIODICAL: Byulleten' Moskovskogo obshchestva ispytateley prirody - Otdel geologicheskoy, 1958, Nr 2, pp 156-157 (USSR)

ABSTRACT: The Devonian Carboniferous transition layers consist of limestone in the south-east Timan, and sandy clay rocks in the east. In both cases, these layers are covered by terrigenous carbonate sediments of the Malevka horizon of the Lower Carboniferous period. Under the sandy clay layers, two zones can be distinguished: the Ludwigite zone, according to the goniatite fauna, and the Prolobite zone, according to the brachiopod fauna. The author gives a detailed description of the two zones.

1. Rock--Geology 2. Rock--Analysis 3. Paleocology

Card 1/1

RAZNITSYN, V.A. Cand Geol-Min Sci -- (diss) "Stratigraphy and paleogeography of ~~Geol~~ of the north eastern slope of Central and Southern Timan. . Mos, 1956. 14 pp 20 cm (Min of Higher Education USSR. Mos Geol-Res Inst im Ordzhonikidze MGRI). 110 copies (KL,10-57,102)

-3-



RAZNITSYN, V.A.

The main features in the paleogeography of the Carboniferous of  
the Timan-Pechora region. Dokl. AN SSSR 114 no.4:865-868 Je '57.  
(MLRA 10:9)

1. Tsentral'naya nauchno-issledovatel'skaya laboratoriya Ukhtinskogo  
kombinata. Predstavleno akademikom N.M. Strakhovym.  
(Pechora Valley--Paleogeography)

RAZNITSYNA, L.A.; RAZNITSYN, V.A.

New find of diabase in the Riphean metamorphic layer in the central  
Timan Ridge. Trudy Inst.geol.Komi fil. AN SSSR no.3:151-156 '62.  
(MIRA 16:9)

(Timan Ridge--Diabase)

RAZNITSYN, V.A.

Parallelism between the Etroeungian of the Russian Platform and of the Urals. Dokl.AN SSSR 106 no.5:893-896 P '56. (MLRA 9:7)

1.Predstavleno akademikom N.M.Strakhovym.  
(Russian Platform--Geology, Stratigraphic)(Ural Mountains--Geology, Stratigraphic)

RAZNITSYN, V.A.

Carboniferous of southern Timan. BuiI.MOIP.Otd.geol. 30 no.6:  
94-96 N-D '55. (MLRA 9:4)  
(Timan Ridge--Geology, Stratigraphic)

RACHITSYN, V. A.

"

"The Carboniferous of Southern Timan"

A paper presented on 29 April. The Activity of the Moscow Society of Naturalists, Byulleten' Moskovskogo Obshchestva Ispytateley Prirody'  
Vol LX.

No 6, Moscow, Nov-Dec 1955, pp 80-90, Geology Section  
Source: U-9235, 29 Nov 1956

PLOTNIKOV, M.A.; RAZNITSYN, V.A., kandi. geol.-miner. nauk, otv.  
red.

[Stratigraphy and lithology of the Upper Permian (Tatarian)  
sediments in the lower reaches of the Mezen' and Vashka  
Rivers] Stratigrafiia i litologiya verkhnepermiskikh (tatar-  
skikh) otlozhenii nizhnego techeniia rek Mezeni i Vashki.  
Moskva, Nauka, 1964. 69 p. (MIRA 17:12)

RAZHITSYN, Viktor Aleksandrovich; FLOTNIKOV, M.A., ed. red.

[Tectonics of the southern Timan Range] Tektonika Iuzhnogo  
Timana. Moskva, Izd-vo "Nauka," 1964. 149 p. (MIRA 17:6)

YEGOROV, P.V., inzh.; RAZNITSYN, Yu.N., inzh.

Complete satisfactoriness of surveying in mining enterprises. [Trudy]  
VNIMI no.45:10-11 '62. (MIRA 16:4)

(Mine surveying)



RAZNITSYNA, L.A.; RAZNITSYN, V.A.

New find of diabase in the Riphean metamorphic layer in the central  
Timan Ridge. Trudy Inst.geol.Komi fil. AN SSSR no.3:151-156 '62.  
(MIRA 16:9)

(Timan Ridge---Diabase)

ROENIT'YN, L.A.; ROENIT'YN, V.A.

Some characteristics of basalt igneous activity in the Timan Ridge.  
Bull. MOIP. Otd.geol. 39 no.5:119-132 S-0 '64.

(MIRA 18:2)

RAZNITSYNA, L.A.

Characteristics of carbonate rocks in the metamorphic layer of  
the southern Timan Ridge. Trudy Inst.geol. Komi fil. AN SSSR  
no.2:111-113 '62. (MIRA 15:7)  
(Timan Ridge--Rocks, Carbonate)

RAZNMORSKIY, I V.

L 50192-65 EWT(m)/EPF(c)/PCC/EWP(j)/FCS(f)/EWP(a) Po-4/Pr-4 RM  
AM5013300 BOOK EXPLOITATION UR/678.4.063.01:539.4/B26 27  
24  
B+1

Bartenev, Georgiy Mikhaylovich; Zuyev, Yuriy Sergeyevich

Strength and composition of highly elastic materials (Prochnost' i vysokoelasticheskikh materialov) Moscow, Izd-vo "Khimiya", 1964. 387 p. illus., biblio., index. Errata slip inserted. 5700 copies printed.

TOPIC TAGS: elastic material, polymer, rubber, elastic material strength, elastic material service life, rubber failure, corrosion failure, rubber fatigue, aggressive medium induced failure

PURPOSE AND COVERAGE: This book is intended for scientific and engineering personnel, and designers of chemical, machine-building, and other branches of industry. It may also be used as a textbook by students and aspirants of schools of higher education. The book deals with the problem of the strength of elastic materials. The concept of the strength, service life, and mechanism of the failure of solids and polymers is outlined and problems of the

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L 50132-65  
AM5013300

15 3  
strength of highly elastic materials, the effect of deformation conditions, composition, and structure of rubber on its strength and service life are discussed. The last five chapters deal with problems of rubber cracking and service life under the effect of chemical agents. Chapters I—IX are written by Doctor of chemical sciences, Professor G. M. Bartenev, most of the Chapter I is written by him together with Candidate of physical and mathematic sciences I. V. Raznmovskiy, and Chapters X—XIV are written by Candidate of chemical sciences Yu. S. Zuyev. Each chapter is accompanied by Soviet and non-Soviet references.

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Subject Index -- 380

SUB CODE: GC

SUBMITTED: 27Oct64

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OTHER: 294

*ml*  
Card 4/4

FEDOROV, V.D.; GUSEV, M.V.; SOKOLOV, L.I.; SOLIVO-LOBTOVOL'SKIY, L.B.;  
KOPIROVSKIY, K.M.; SHLENOVA, G.S.; CHAYKIN, I. Ya.;  
RAZNOSHCHIK, V.V.; SPANOVSKAYA, V.D.; GRIGORASH, V.A.;  
MARKOVA, K.P.; MAKSIMOV, V.N.; TELITCHENKO, M.M.; LEVSHINA,  
N.A.

Supplement. V.D.Fedorov and others. Biul. MOIP. Otd. biol.  
69 no. 3:158-166 My-Je '64. (MIRA 17:7)



RAZNOSCHIKOV, D.V.

Cantilever swing conveyors for heaping cone-shaped rock dumps.  
Bul. tekhn.-ekon. inform. no.8:7-9 '58. (MIRA 11:10)  
(Conveying machinery)

RAZNOSCHIKOV, D.V.

Tubular cranes for erecting large-panel and large-block structures.  
Biul.tekh.-ekon.inform.no.2:48-51 '59. (MIRA 12:3)  
(Cranes, derricks, etc.)

AL'TSHULER, Z.Ye., inzh.; BASTUNSKIY, M.A., inzh.; BERSTEL', V.N., inzh.;  
 BIRENBERG, I.E., inzh.; BOGOPOLSKIY, B.Kh., inzh.; BUKHARIN, S.I.,  
 inzh.; GERSHTEYN, B.G., inzh.; GRINSHPUN, L.V., inzh.; DREYER, G.I.,  
 inzh.; DIMERSHTEYN, A.G., inzh.; ZIATOPOL'SKIY, D.S., inzh.; KLANYUK,  
 A.V., inzh.; KOZIN, Yu.V., inzh.; LEVITIN, I.P., inzh.; MEL'NIKOV,  
 L.F., inzh.; MEL'KUMOV, L.G., inzh.; NADEL', M.B., inzh.; PAVLOV,  
 N.A., inzh.; PASLEN, D.A., inzh.; PESIN, B.Ya., inzh.; PYATKOVSKIY,  
 P.I., inzh.; RAZNOSCHIKOV, D.V., inzh.; ROZENoyer, G.Ya., inzh.;  
 ROZENBERG, R.L., inzh.; ROYTENBERG, N.L., inzh.; RYABINSKIY, Ya.I.,  
 inzh.; SYPCHENKO, I.I., inzh.; TABACHNIKOV, L.D., inzh.; FEL'DMAN,  
 E.S., inzh.; SHTRAKHMAN, G.Ya., inzh.; SHTERENGAS, N.S., inzh.;  
 LEVITIN, I.P., otvetstvennyy red.; STEL'MAKH, A.N., red.izd-va;  
 BEKKER, O.G., tekhn.red.

[Overall mechanization and automatization of production processes in  
 the coal industry] Kompleksnaya mekhanizatsiya i avtomatizatsiya  
 proizvodstvennykh protsessov v ugol'noi promyshlennosti. Pod red.  
 I.U.V.Kozina i dr. Moskva, Ugletekhizdat, 1957. 82 p. (MIRA 11:3)

1. Gosudarstvennyy proyektno-konstruktorskiy institut. 2. Institut  
 Giprougleavtomatizatsiya i Tekhnicheskogo Upravleniya Ministerstva  
 ugol'noy promyshlennosti (for all except: Levitin, Stel'makh,  
 Bekker)

(Automatic control) (Coal mining machinery)

PYATKOVSKIY, P.I.; RAZNOSCHIKOV, D.V.

Tie tamper. Bul.tekh.-ekon.inform. no.4:61-63 '60. (MIRA 13:11)  
(Mine railroads)

*209 2 1007 1958. 1/1*  
TURCHENKOVA, Ye.K., inzh.; SIKORSKIY, A.I., inzh.; YEGNUS, R.M., inzh.;  
BOLDYREV, L.I., inzh.; RAZNOTINA, Ye.T., inzh.; BOL'SHAKOV, L.A.,  
kand.tekhn.nauk; GAVRIKOV, V.Z., inzh.

Life of 650 rolling mill sleeve joints made of cast iron with  
spheroidal graphite. Stal' 18 no.8:763-766 Ag '58. (MIRA 11:8)

1.Zhdanovskiy metallurgicheskiy institut i zavod "Azovstal'."  
(Cast iron--Metallography)

RAZNOTINA, Ye. T

SOV/133-58-8-29/30

AUTHORS: Turchenkova, Ye.K., Sikorskiy, A.I., Yegnus, R.M.,  
Boldyrev, L.I., Raznotina, Ye.T., Engineers, Bol'shakov,  
L.A., Candidate of Technical Sciences, and Gavrikov, V.Z.,  
Engineer

TITLE: Performance of the Coupling Sleeves Made From Nodular Iron  
at the Mill 650 (Rabota soyedinitel'nykh muft iz chuguna  
s sharovidnym grafitom na stane 650)

PERIODICAL: Stal', 1958, Nr 8, pp 763 - 766 (USSR)

ABSTRACT: As the durability of the coupling sleeves of the mill 650  
made from grey iron decreased with increased degree of  
reduction per pass introduced in the rolling practice, the  
use of sleeves made from nodular iron was investigated.  
Four series of experimental smelting of magnesium-inoculated  
iron were carried out. Sleeves from the first series  
were tested as cast and of the remaining series after  
various heat treatments. The chemical composition,  
mechanical, and conditions of thermal treatment are given  
in Table 1. The microstructure of heat-treated metal  
- Figures 1-3, the mould for casting of sleeves - Figure 4,  
the results of service life of sleeves made from nodular  
iron, grey iron and steel - Table 2. On the basis of the  
results obtained, it is concluded that the service life

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SOV/153-58-8-29/30  
Performance of the Coupling Sleeves Made from Nodular Iron at the  
Mill 650

of sleeves from nodular iron is 4-6 times higher than that of sleeves made from grey iron. The optimum heat treatment is normalisation with subsequent annealing at 580 °C. Sleeves should be cast with the consumption of metal for shrinkage head not less than 20% of the weight of casting. When coupling sleeves are not heat-treated, then the sum of C + Si in nodular iron should be maintained in a range of 5.5-6.0%. There are 5 figures and 2 tables.

ASSOCIATIONS: Zhdanovskiy metallurgicheskiy institut (Zhdanov Metallurgical Institute) and Zavod "Azovstal'" ("Azovstal'" Works)

Card 2/2

1. Couplings--Materials
2. Couplings--Test results
3. Iron--Applications
4. Steel--Applications

PAVLOVSKIY, V.Ya.; TSIRENKO, I.Z.; PRADIN, M.I.; KRISHNACHARI, I.D.;  
SHAPIRO, Yu.A.; GRIGOR'YEVA, M.G.; KALININA, Ye.T.; KAFLOVA, G.V.

Rolling mill rolls of hypereutectoid chromium-vanadium 90 KhF steel.  
Metallurg 10 no.7:40 J1 '65. (MIRA 12:7)

1. Metallurgicheskiy zavod "Azovstal".



RAZNY, Jan

Again about the geologic excursion to the Sudetes. Wiad naft  
10 no. 5:119-121 My '64.

RAZNY, Mieczyslaw

A case of pharyngeal and laryngeal electric burns. Otolaryng.  
pol. 17 no.2:209-214 '63.

1. Z Oddziału Laryngologicznego Szpitala Miejskiego w Nowej  
Hucie Ordynator: doc. dr med. S. Sokolowski.  
(LARYNX) (PHARYNX) (BURNS, ELECTRIC)

RAZNY, Mieczyslaw

A case of pharyngeal and laryngeal electric burns. Otolaryng.  
pol. 17 no.2:209-214 '63.

1. Z Oddziału Laryngologicznego Szpitala Miejskiego w Nowej  
Hucie Ordynator: doc. dr med. S. Sokolowski.  
(LARYNX) (PHARYNX) (BURNS, ELECTRIC)

L 2991-66 FSS-2/ENT(1)/FC(v)-3/FCG/ENA(d)/ENA(h) TT/GS/GW  
 ACCESSION NR: AT5023633 UR/0000/65/000/000/0514/0528

AUTHOR: Blokh, Ya. L.; Dorman, L. I.; Kurnosova, L. V.; Logachev, V. I.; Platonov, G. F.; Razorenkov, L. A.; Sinitsina, V. G.; Suslov, A. A.; Fradkin, M. I. 76  
 871

TITLE: Some results of the study of cosmic ray nucleons by the Elektron-2 satellite

SOURCE: Vsesoyuznaya konferentsiya po fizike kosmicheskogo prostranstva. Moscow, 1965. Issledovaniya kosmicheskogo prostranstva (Space research); trudy konferentsii. Moscow, Izd-vo Nauka, 1965, 514-528

TOPIC TAGS: satellite, radiation, cosmic ray, cosmic radiation, nuclear particle, nucleon/Elektron 2 satellite

ABSTRACT: Included in the instrumentation of the Elektron-2 satellite (launched, Jan 1964; apogee, 68,000 km) was a combination of internal and external counters designed to register nuclear components of primary cosmic radiation. The design and calibration of this apparatus is described, and some results of partially-reduced data are discussed. One counter mounted on the external surface of the satellite was a combination of the Cerenkov and scintillation types which responded to nucleons in the atomic number range of  $2 \leq Z \leq 30$ . The internal counter was a Cerenkov

Card 1/6

L 2991-66

ACCESSION NR: AT5023633

type, registering at the discrete levels of  $Z \geq 2$ ,  $Z \geq 5$ , and  $Z \geq 15$ . All counters were shielded and were designed to register only particles with energies  $\geq 600$  Mev/nuc. Fig. 1 of the Enclosure gives the basic schematic of the external counter combination. The authors detail the method used to calibrate the photomultiplier outputs in terms of the Z-range of input excitation; for example, for the type FEU-35 external counter, the anode output characteristic corresponded to the range from  $Z = 4$  to  $Z = 21$ , and the output of the 7th dynode, to the range  $Z = 6$  to  $Z = 28$ . The calibration technique was to excite a SiC electroluminescent diode with a high-voltage, short-duration (4-30 nsec) thyatron pulse, providing the phototube with a light input similar to a counter input. Early results from these primary particle counters, obtained during the IQSY, have been a useful supplement to analogous satellite data from the 1959-1962 period, during which solar activity was undergoing the transition from maximum to minimum. Comparative results are seen in Fig. 2, which shows an almost twofold increase in nuclear particles recorded near the solar activity minimum. Table 1 compares data from one orbit of Elektron-2 to that of the 1959 and 1960 satellites and the 1962 Mars-1 probe. To date only data for the  $Z \geq 15$  particles have been reduced enough for statistical analysis. A large increase in incidence of this size particle was noted during solar eruptions observed in the course of the Elektron-2 flight. Orig. art. has: 18 figures, 1 table, and 1 formula. [SH]

ASSOCIATION: none

Cord 2/6

L 2991-66

ACCESSION NR: AT5023633

SUBMITTED: 02Sep65

NO REF SOV: 003

ENCL: 03

OTHER: 000

SUB CODE: AA, NP

ATD PRESS: 4109

Cord 3/6

HAZDOLKOV, A.

"Methods for technical and economic evaluation of the new technology."

TEKHNIKA. Sofia, Bulgaria., Vol. 7, No. 8, 1958

Monthly list of EAST EUROPEAN ACCESSIONS (LEAI). LC, Vol. 8, No. 7, July 1959, Unclass

AMBOLIOV, M.

"Concerning the additional expenditures and the efficient utilization of machinery in hydraulic engineering."

HYDRAULIKA I MELIORACIIA, Sofia, Bulgaria., Vol. 4, No. 1, 1959

Monthly list of EAST EUROPEAN ACCESSIONS (EEAI), LC, Vol. 6, No. 7, July 1959, Unclas



1959, 4.

"The cycles of operation and economic effect of the equipment introduced in Bulgarian construction."

STROITELSTVO: Vol. 4, No. 5, 1959; Sofia, Bulgaria

Monthly list of EAST EUROPEAN ACQUISITIONS INDEX (EAAI), Library of Congress, Vol. 1, No. 1, August, 1959

Unclassified

38212. RAZON, V. K.

Na stroitel'stve komsomol'skoy lesonoy polosy. (Chkal obl.) Les i  
step', 1949, No 8, s. 12-18

OSOKIN, N.G.; RAZORENOV, A.A.; Primali uchastiye: BELONOGOV, F.F.,  
laborant; VINOGRADOV, I.P., laborant

Machinability of nickel silver depending on its structural  
and chemical composition. Sbor. nauch. trud. GINTSVETMET  
no.33:364-368 '60. (MIRA 15:3)  
(Nickel silver--Analysis) (Metal cutting)

RAZOPKNOV, A.P., starshiy dorozhnyy master (stantsiya Mtsensk Moskovsko-Kursko-Donbassakoy dorogi).

Installing R65-type switch boxes. Put' i put. khoz. no. 8:17 Ag' 58.  
(MIRA 11:8)  
(Railroads--Switches)

| 1ST AND 2ND CROSS                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |  |  |  |  |  | 1ST AND 2ND CROSS |  |  |  |  |  |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|-------------------|--|--|--|--|--|--|--|--|--|
| PROCESSES AND PROPERTIES INDEX                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |  |  |  |  |  |  |  |                   |  |  |  |  |  |  |  |  |  |
| <p>CA</p> <p style="text-align: right;">18</p> <p>Determination of the yield of slaked lime on the basis of the content of active calcium oxide in the products. A. S. Razorenov. <i>From: Stroitel. Material. 2, No. 10-11, 10-50(1940).</i>—The detn. is by an elementary computation based on the activity of the lime used for slaking and the slaked lime and by-products obtained. The activity is detd. by titrating with N HCl with phenolphthalein. E. E. Stefanowsky</p> |  |  |  |  |  |  |  |  |  |                   |  |  |  |  |  |  |  |  |  |
| <p>COMMON ELEMENTS</p> <p>COMMON VARIANTS INDEX</p> <p>OPEN</p> <p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p> <p>FROM: STROITEL</p> <p>1ST AND 2ND CROSS</p> <p>1ST AND 2ND CROSS</p> <p>1ST AND 2ND CROSS</p>                                                                                                                                                                                                                                                            |  |  |  |  |  |  |  |  |  |                   |  |  |  |  |  |  |  |  |  |

| 1ST AND 2ND COLUMNS                                                                                                                                                                 |  |  |  |  |  |  |  |  |  | 100 AND 4TH COLUMNS |  |  |  |  |  |  |  |  |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|---------------------|--|--|--|--|--|--|--|--|--|
| PROCESSES AND PROPERTIES INDEX                                                                                                                                                      |  |  |  |  |  |  |  |  |  |                     |  |  |  |  |  |  |  |  |  |
| <p><i>Ca</i></p> <p>Methods of testing the mechanical strength of silica-brick. A. S. Razumov, <i>Strouel. Materialy</i> 1937, No. 12, 5 II. E. E. Stefanowsky</p> <p><i>19</i></p> |  |  |  |  |  |  |  |  |  |                     |  |  |  |  |  |  |  |  |  |
| <p>ASIA-SLA METALLURGICAL LITERATURE CLASSIFICATION</p> <p>FROM STRONG</p> <p>FROM STRONG</p>                                                                                       |  |  |  |  |  |  |  |  |  |                     |  |  |  |  |  |  |  |  |  |
| 1ST AND 2ND COLUMNS                                                                                                                                                                 |  |  |  |  |  |  |  |  |  | 100 AND 4TH COLUMNS |  |  |  |  |  |  |  |  |  |

| 1ST AND 2ND COLUMNS                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  |  |  |  |  |  |  |  | 3RD AND 4TH COLUMNS |  |  |  |  |  |  |  |  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|---------------------|--|--|--|--|--|--|--|--|--|
| PROCESSES AND PROPERTIES INDEX                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |  |  |  |  |  |  |                     |  |  |  |  |  |  |  |  |  |
| <p>Experience in the production of hollow sand lime brick.<br/> A. S. Razorenov and V. F. Abashkina. <i>Keramika</i> 1939,<br/> No. 6, 40-4. An ordinary sand-lime batch with 6.8%<br/> active lime can be used. Lime must be finely ground - 1<br/> 2% retained on a screen, 144 meshes per sq. cm. The<br/> moisture content of the batch must be 4-5%. The batch<br/> fed to a special mixer must be moistened beforehand.<br/> E. F. Stefanowsky</p> |  |  |  |  |  |  |  |  |  |                     |  |  |  |  |  |  |  |  |  |
| <p>AS A S L A METALLURGICAL LITERATURE CLASSIFICATION</p>                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |  |  |  |  |  |  |                     |  |  |  |  |  |  |  |  |  |





co 20

Lime-ash cement from ash of Moscow basin coal burned in pulverized condition. V. V. Suravtsev and A. N. Mamontov. *Strashel Material*, 1938, No. 6, 10-20, of (A-30; 1837). Twenty eight days' hardening of the cement proceeds better in the air, than in water. A limited addn. of portland cement (10% of the wt. of lime) improves the mechanical strength. The binding properties increase considerably if solns. of  $\text{CaCl}_2$  and  $\text{NaCl}$  are used instead of water for mixing; the increase in strength continues after 12 months.  $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$  also increases the strength at first, but at later periods a decrease of strength is sometimes observed (after a preliminary moist storage). The activity of the ash increases with increased dispersity. After long storage, the lime-ash cement decreases in binding properties.

H. K. Melanovsky

AS A 11 A METALLURGICAL LITERATURE CLASSIFICATION

| 1ST AND 2ND ORDERS                                                                                                                                                                                                                                    |  |  |  |  |  |  |  |  |  | 3RD AND 4TH ORDERS |  |  |  |  |  |  |  |  |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|--------------------|--|--|--|--|--|--|--|--|--|
| PROCESSES AND PROPERTIES INDEX                                                                                                                                                                                                                        |  |  |  |  |  |  |  |  |  | 1ST AND 2ND ORDERS |  |  |  |  |  |  |  |  |  |
| <p>Alkyl nitrophenyl ethers. V. A. Iamailku and B. A. Razorenov. Russ. 501<br/> Sept. 30, 1925. Alkyl esters of aromatic sulfonic acids are acted upon with nitro-<br/> phenols in the presence of aq. solns. of alkali or alk. earth hydroxides.</p> |  |  |  |  |  |  |  |  |  |                    |  |  |  |  |  |  |  |  |  |
| ASB-31A METALLURGICAL LITERATURE CLASSIFICATION                                                                                                                                                                                                       |  |  |  |  |  |  |  |  |  | E Z                |  |  |  |  |  |  |  |  |  |
| 1925-1926                                                                                                                                                                                                                                             |  |  |  |  |  |  |  |  |  | 1927-1928          |  |  |  |  |  |  |  |  |  |
| 1929-1930                                                                                                                                                                                                                                             |  |  |  |  |  |  |  |  |  | 1931-1932          |  |  |  |  |  |  |  |  |  |
| 1933-1934                                                                                                                                                                                                                                             |  |  |  |  |  |  |  |  |  | 1935-1936          |  |  |  |  |  |  |  |  |  |
| 1937-1938                                                                                                                                                                                                                                             |  |  |  |  |  |  |  |  |  | 1939-1940          |  |  |  |  |  |  |  |  |  |
| 1941-1942                                                                                                                                                                                                                                             |  |  |  |  |  |  |  |  |  | 1943-1944          |  |  |  |  |  |  |  |  |  |
| 1945-1946                                                                                                                                                                                                                                             |  |  |  |  |  |  |  |  |  | 1947-1948          |  |  |  |  |  |  |  |  |  |
| 1949-1950                                                                                                                                                                                                                                             |  |  |  |  |  |  |  |  |  | 1951-1952          |  |  |  |  |  |  |  |  |  |
| 1953-1954                                                                                                                                                                                                                                             |  |  |  |  |  |  |  |  |  | 1955-1956          |  |  |  |  |  |  |  |  |  |
| 1957-1958                                                                                                                                                                                                                                             |  |  |  |  |  |  |  |  |  | 1959-1960          |  |  |  |  |  |  |  |  |  |
| 1961-1962                                                                                                                                                                                                                                             |  |  |  |  |  |  |  |  |  | 1963-1964          |  |  |  |  |  |  |  |  |  |
| 1965-1966                                                                                                                                                                                                                                             |  |  |  |  |  |  |  |  |  | 1967-1968          |  |  |  |  |  |  |  |  |  |
| 1969-1970                                                                                                                                                                                                                                             |  |  |  |  |  |  |  |  |  | 1971-1972          |  |  |  |  |  |  |  |  |  |
| 1973-1974                                                                                                                                                                                                                                             |  |  |  |  |  |  |  |  |  | 1975-1976          |  |  |  |  |  |  |  |  |  |
| 1977-1978                                                                                                                                                                                                                                             |  |  |  |  |  |  |  |  |  | 1979-1980          |  |  |  |  |  |  |  |  |  |
| 1981-1982                                                                                                                                                                                                                                             |  |  |  |  |  |  |  |  |  | 1983-1984          |  |  |  |  |  |  |  |  |  |
| 1985-1986                                                                                                                                                                                                                                             |  |  |  |  |  |  |  |  |  | 1987-1988          |  |  |  |  |  |  |  |  |  |
| 1989-1990                                                                                                                                                                                                                                             |  |  |  |  |  |  |  |  |  | 1991-1992          |  |  |  |  |  |  |  |  |  |
| 1993-1994                                                                                                                                                                                                                                             |  |  |  |  |  |  |  |  |  | 1995-1996          |  |  |  |  |  |  |  |  |  |
| 1997-1998                                                                                                                                                                                                                                             |  |  |  |  |  |  |  |  |  | 1999-2000          |  |  |  |  |  |  |  |  |  |

RAZORENCOV, G. A.

"On the Propagation of the Current in Parallel Wires with a Circular Cross Section with Account to the 'Nearness Effect'," Zhur. Tekh. Fiz., 14, Nos. 10-11, 1944. Mbr., Energetics Inst. im. G. M. Krzhizhanovskiy, Dept. Tech. Sci., Acad. Sci., -1943-.

RAZORENOV, I.F., kandidat tekhnicheskikh nauk.

Experimental investigation of the stability of single  
foundations subject to horizontal loading. Trudy TSNIS  
no.13:55-145 '55. (MLRA 9:6)  
(Foundations) (Soil mechanics)

BEREZANTSEV, V.G., prof.; YAROSHENKO, V.A.; PROKOPOVICH, A.G.; RAZORENOV, I.F.;  
SIDOROV, N.N.; SOROKIN, N.N., red.; BOBROVA, Ye.N., tekhn. red.

[Research on the strength of sand foundations] Issledovaniia  
prochnosti peschanykh osnovanii. Moskva, Gos. transp. zhel-dor.  
izd-vo, 1958. 139 p. (Babushkin, Vsesoiuznyi nauchno-issledovatel'-  
skii institut transportnogo stroitel'stva. Trudy, no. 28)  
(MIRA 12:2)

(Foundations)

(Sand)

RAZORENOV, I. F.

Soil Mechanics

Dissertation: -- "Experimental Investigation of the Stability and Calculation of Single Foundations for Horizontal Loads." Cand Tech Sci, All-Union Sci Res Inst of Railroad Construction and Planning, Moscow, 1953. (Referativnyy Zhurnal -- Mekhanika, Moscow, Mar 54)

SO: SUM 1, 30 Sep 54

BOGOMOLOV, K. S., RAZORENOVA, I. F., RUDITSKAYA, I. A. and SROTINSKAYA, A. A.  
Sci. Res. Inst. Cinephotography.

"Methodes d'accroissement de Sensibilite des Emulsions Nucleaires Irradiees  
Aux Temperatures Basses."

paper presented at the Second Intl. Colloquium on Corpuscular Photography.  
Montreal, 21 Aug - 7 Sep 1958.

Encl: B-3.114 687

*Razorenov, I. F.*

AUTHORS: Bogomolov, K.S.; Razorenova, I.F. SOV-77-3-5-1/21

TITLE: A Study of the Radiolysis of Silver Halide (Issledovaniye radioliza galoidnogo serebra)

PERIODICAL: Zhurnal nauchnoy i prikladnoy fotografii i kinematografii, 1958, Vol 3, Nr 5, pp 321-322 (USSR)

ABSTRACT: Tests were made to determine the loss of energy by the ionizing particles in the radiolysis of silver halide. The effect of grain size, degree of maturation, and gold sensitization was studied. Emulsions were exposed to electrons with an energy of 61 kev, and the photographic silver was determined by potentiometric titration. The results, drawn up in tabular form, show that the loss of energy through electron action in the formation of one atom of silver depends on the maturation period of the emulsion and is not affected essentially by gold sensitization. When the emulsion is effected by light this dependence does not hold. The author concludes that the energy quantum of light is entirely absorbed by the emulsion. Secondary electrons, on the other hand, move in the emulsion structure and help to raise its thermal energy. In emulsions with very low maturation periods, not all the electrons are captured by the

Card 1/2



A Study of the Radiolysis of Silver Halide

SOV-77-3-5-1/21

sensitivity centers, and part of their energy goes to build up the semi-crystalline particles, thus completing the emulsion's structure.

There are 2 tables and 7 references, 1 of which is Soviet, 4 American, 1 Dutch and 1 German.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy kinofotoinstitut  
(All-Union Research Institute for Photography and Cinematography)

SUBMITTED: January 20, 1957

1. Photographic emulsions--Properties 2. Photographic emulsions  
--Theory 3. Silver halides--Electrochemistry

Card 2/2

SOV-77-3-5-12/21

AUTHORS: Bogomolov, K.S.; Razorenova, I.F.; Ruditskaya, I.A.;  
Sirovinskaya, A.A.

TITLE: The Sensitivity of Hypersensitized Nuclear Photographic  
Emulsions at the Temperature of Liquid Hydrogen (Chuvst-  
vitel'nost' gipersensibilizirovannykh yadernykh fotografi-  
cheskikh emul'siy pri temperature zhidkogo vodoroda)

PERIODICAL: Zhurnal nauchnoy i prikladnoy fotografii i kinematografii,  
1958, Vol 3, Nr 5, pp 380-381 (USSR)

ABSTRACT: Buckingless "P" films with iodide, and others without iodide,  
sensitized in a 3% solution of triethanolamine, were exposed  
in liquid hydrogen to gamma-radiation at 250 mev or to a beam  
of Pi-mesons at 300 mev. The results are drawn up in tabular  
form. The trajectories of the relativistic particles, at  
the temperature of liquid hydrogen, can be traced in the form  
of very dense tracks on the hypersensitized, iodine-less "P"  
silver bromide nuclear emulsions. A significant drop in the  
sensitivity of the emulsions containing iodide at liquid  
hydrogen temperature can be confirmed from the table. There  
is 1 table and 2 Soviet references.

Card 1/2

SOV-77-1-6-1.7/71

The Sensitivity of Hypersensitized Nuclear Photographic Emulsions at the Temperature of Liquid Hydrogen

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy kinofotoinstitut  
(The All-Union Research Institute into Photography and Cinematography)

SUBMITTED: May 26, 1958

1. Photographic emulsions--Sensitivity 2. Photographic emulsions  
--Applications 3. Gamma rays--Photochemical effects 4. Hydrogen  
(Liquid)--Applications

Card 2/2

GINZBURG, V.; KURNOSOVA, L., kand. fiziko-matematicheskikh nauk;  
RAZORENOV, L., kand. fiziko-matematicheskikh nauk; FRADKIN, M.,  
kand. fiziko-matematicheskikh nauk

Laboratories in orbits. Av. i kosm. 45 no.6:13-22 '62.  
(MIRA 15:10)

1. Chlen-korrespondent AN SSSR (for Ginsburg).

(Outer space--Exploration)



1199. Pulses Produced in Two Ionisation Chambers by Extensive Atmospheric Showers by L. Rasorenov and A. Knyazev Doklady Akad Nauk SSSR 60 1531-1534 (1948) June 21 (In Russian)

Two spherical ionisation chambers and 4 groups of counters recorded extensive showers photographically. It was found that, as a general rule, the coinciding pulses in 2 ionisation chambers were of very unequal values. The analysis of the phenomenon on the basis of the experimental data obtained leads to the following interpretation: an extensive shower of sufficient density should produce equal pulses in both chambers; however if additional ionization takes place in one of the chambers the pulses are increased considerably; this additional effect can be ascribed (1) to heavy particles from nuclear fissions, or (2) to dense and narrow streams of relativistic particles crossing the chamber, or (3) to an explosive shower originating in the chamber's wall. This effect shows the inadequacy of the current theory of extensive showers.

USSR/Nuclear Physics - Cosmic Radiation Apr 49  
Nuclear Physics - Ionization Chambers

"Impulses in Two Ionized Chambers Caused by Wide Atmospheric Showers at an Altitude of 3,260 Meters,"  
L. A. Razorenov, A. K. Knyazev, Phys Inst Imeni  
P. M. Lebedev, Acad Sci USSR, 9 pp

"Zhur Ekspier i Teoret Fiz" Vol XIX, No 4

Studied impulses, coincident in time, in two ionization chambers connected with wide atmospheric showers. Established for first time that values of coincident impulses in both chambers were quite different as a rule. Consequently, these impulses  
38/49T100

USSR/Nuclear Physics - Cosmic Radiation Apr 49  
(Contd)

cannot be fully explained by the passage of an approximately equal number of fast particles from wide, dense atmospheric showers through both ionization chambers. This established the importance of nonelectromagnetic processes in wide showers. Discusses various hypotheses which might explain the observed phenomena. Submitted 14 Jul 48.

38/49T100

1/15/1977

WIS/... - ...  
... - Elementary Particles

Apr 19

"The Scintillation in Scintillation Counters," V. Nikolayev, S. Mikhalchik, L. ...  
..., ...

"Scintillation Counters," ...

The scintillation counters with ... thick, with a diameter of ... of the external electrodes of 2.5 cm. Counters were filled with ... of 3 at. ... experiments with four counters placed in a square arrangement. In the first, counters were unshielded, and in the second, surrounded by an aluminum shield 1.2 cm thick. Insertion of aluminum shield did not cause any noticeable change in the number of double coincidences, contradicting the assumption that coincident pulses are created by ... in the wall of one counter, ... into the second counter. ... by ...

WIS/.../1/5



RAZORENOV, I. 

USSR/Nuclear Physics - Cosmic Rays  
Absorption, Carbon

1 Aug 49

"Altitude Dependence and Curves of Absorption in Carbon for Particles Generating Pulses in an Ionization Chamber at Altitudes of 3,860 and 4,700 Meters," G. Guro, V. Nikolayev, I. Razorenov, I. Chuvilo, Phys Inst imeni P. N. Lebedev, Acad Sci USSR, 4 pp

"Dok Ak Nauk SSSR" Vol LXVII, No 4

Used a 24-cm diameter spherical ionization chamber filled with argon to a pressure of 4 atm in experiments. Registered pulses of fast-acting counters arranged to register 4- and 7-repeated coincidences. Air layer between the two altitudes was compensated for by a layer of graphite equivalent in mass. Tables show number of pulses in an unshielded chamber and in the chamber when shielded by graphite layers with thicknesses of 64, 128, and 192 g/cm<sup>2</sup>. Submitted by Acad D. V. Skobel'tsyn 20 May 49.

PA 3/50T79



RAZORENOV, L. A.

USSR/Nuclear physics - Light

Card 1/1 Pub. 77 - 7/20

Authors : Razorenov, L. A., Cand. Physico-Math. Sci.

Title : Photons

Periodical : Nauka i zhizn' 21/12, 17-19, Dec 1954

Abstract : The generally accepted facts about electromagnetic waves are presented with stress on the significance of the difference in wave lengths and the phenomena which led to the development of the quantum theory of light. The origin and characteristics of the photon are dealt with, particularly in the matter of collisions of particles which result in splitting. The photon is found to be a material particle, which has energy varying in accordance with the wave length. The author finds that a photon of sufficient energy in the proximity of an atomic nucleus produces a pair of particles charged with opposite signs. The role of the photon in the transformation of energy into matter and vice versa is discussed. One Russian reference. Illustration; diagrams.

Institution : ...

Submitted : ...

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Mesons. Nauka i zhizn' 22 no.7:21-23 J1 '55. (MLRA 8:9)  
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Author : Kurnosova, L.V., Razorenov, L.A., Cherenkov, P.A.

Inst : Phys. Inst. USSR Acad. of Sciences

Title : Scattering of 250 Mev Photons by Free Electrons

Orig Pub : Zh. eksperim. i teor. fiziki, 1956, 30, No 4, 690-694

Abstract : An investigation was made of the Compton scattering of 222 -- 233 and 235 -- 248 Mev photons for cases, when almost the entire photon energy is transferred to the recoil electrons. The electrons and positrons formed by the photons were deflected by a magnetic field and recorded by telescopes made of counters, connected for double coincidence. The values of the Compton-scattering cross sections were determined from the ratio to the value of the cross section of the formed pairs. The relationships obtained are in agreement, within the limits of precision of the measurements, with those calculated from the Bethe-Heitler equation for the pair-formation cross section and from the Klein-Nishina-Tamm equation for the Compton-scattering cross section.

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Hyperons. Nauka i zhizn' 24 no.8:17-19 Ag '57.  
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RAZORENOV, L.A., VERNOV, S.H., GILZBURG, V.L., KURNOSOVA, L.V., FRADKIN, M.I.

"Investigation of the Composition in Primary Cosmic Rays," Uspekhi  
Fizicheskikh Nauk, Vol. 63, No. 1-2, p. 190, September 1957.

SO: JPRS Report No. 187

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AUTHOR VERMOV, S.N., GINZBURG, V.L., KURNOSOVA, L.V., RAZORENOV, L.A.,  
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TITLE The Investigation of the Composition of Primary Cosmic Radiation  
(Issledovaniye sostava pervichnogo kosmicheskogo izlucheniya. Russian)

PERIODICAL Uspekhi Fiz. Nauk, 1957, Vol 63, Nr 1a, pp 131 - Nr 1b ; p 148 (U.S.S.R.)

ABSTRACT According to the data available at present, cosmic radiation consists of protons,  $\alpha$ -particles and, to a far less extent, of heavy nuclei. The distribution of the nuclei with  $Z > 2$  has as yet not been investigated sufficiently well and also other problems are still to be solved. Rockets are not suited for such measurements because their time of flight outside the atmosphere is too short. By means of artificial earth satellites, however, the necessary statistical material for the investigation of rarely occurring heavy nuclei can be obtained. One of the most important problems concerns the numerical ratio between the currents of the light nuclei Li, Be, B and the nuclei C, N, O, F. By experimental determination of this ratio the various theories concerning the creation of cosmic radiation can be confirmed or rejected, If the particles of the cosmic radiation in the clouds of the supernovae are accelerated, a value  $\geq 0,1$  is obtained for the ratio  $(Li, Be, B) / (C, N, O, F)$ . In the case of this theory the ratio can also be somewhat higher, but never lower than 0,1. The data at present obtained for this ratio contradict each other. The problem whether or not nuclei with  $Z > 30$  exist in cos-

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mic radiation can also be solved by means of artificial earth satellites. The existence of such nuclei in cosmic radiation would, on account of its large interaction cross section and the short range in the interstellar space, indicate an exceptionally large amount of heavy elements existing in the sources of cosmic radiation.

The experimental data on the composition of primary radiation:

The results of the experiments carried out in 1952 - 1953 have already been published in form of a collection of articles. The respective results obtained within the last years have been compiled in two tables. The importance of the geographical location of the place of observation in the case of equal geomagnetic latitude is pointed out. From the point of view of determining the energy spectrum of the various nuclear groups in primary cosmic radiation, with the help of artificial earth satellites afford great possibilities, because in this way the intensity of the fluxes of the particles with various energies (even at different widths) can be determined by means of the same devices. This, naturally, will considerably increase the reliability of the data obtained concerning the energy spectrum of the primary nuclei. One of the most interesting problems of primary cosmic radiation is the determination of

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the amount of the nuclei of the group Li, Be, B. 53-1A-9/18

The experimental method for the study of the charge spectrum of nuclei in primary cosmic radiation. Such methods are of advantage as do not discriminate the particles with respect to their charge and mass. The use of particle counters in the case of which, on the occasion of the passage of a particle, the produced pulse depends upon the charge of the particle, forms part of this method. The application of such devices to an artificial earth satellite is, besides, of advantage in-so-far as the measured data can be telegraphed to the earth. The disadvantages of methods which are based upon the ionization of a medium by rapidly charged particles, are enumerated. The CHEREKOV counter is free from such disadvantages. The conditions to be fulfilled when measuring by this method, are enumerated. The apparatus is discussed on the basis of a drawing. During the time of observation of one week about 1000 nuclei with  $Z \geq 6$  cm, 7000  $\alpha$ -particles and a corresponding number of Li-, Be- and B-nuclei can be registered. For the experiments it is intended to register the differential spectrum of the nuclei with respect to Z in the interval from the  $\alpha$ -particle up to oxygen. Such a method is realizable only if the device is able to solve every peak belonging to the various values of Z. The use of artificial satellites offers new possi-

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58-15-9, 13  
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bilities for the investigation of the primary cosmic radiation: viz. measuring of the primary proton flux, explaining of the part played by the "albedo" of the atmosphere of the earth, the determination of the lower limit of the electron-positron components, the study of the interaction of the primary particles with matter and the variations with respect to time of intensity. (With 7 illustrations and 4 tables).

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